

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

Claims 1 – 13 (Canceled)

14. (Original) A method for remanufacturing a discharged vaporizing-liquid fire extinguisher comprising:

removing a first discharge assembly from an extinguisher bottle;

removing a dip tube from the bottle;

cleaning the bottle;

filling the bottle with a liquid suppressant;

inserting a gas generator into the bottle; and

either reinstalling the first discharge assembly or installing a second discharge assembly.

15. (Original) The method of claim 14 wherein:

the removal of the dip tube is simultaneous with or subsequent to the removal of the first discharge assembly;

the insertion of the gas generator comprises positioning the gas generator so as to replace the dip tube or an assembly, which had included the dip tube;

the step of filling the bottle with a liquid suppressant comprises filling the bottle with a liquid having a vapor pressure of less than 100 psi at 21°C; and

the gas generator is inserted after the bottle is filled.

16. (Original) The method of claim 14 wherein the second discharge assembly is a reconditioned discharge assembly from a substantially identical vaporizing-liquid fire extinguisher.

17. (Original) The method of claim 14 wherein the step of inserting a gas generator comprises feeding an elongate flexible gas generant-containing member into the bottle, the member having a length longer than a length of the bottle so as to place the member in a convoluted condition within the bottle.
18. (New) The method of claim 14 wherein the liquid suppressant is selected from the group consisting of dodecafluoro-2-methylpentan-2-one, heptafluoropropane, methoxy-nonafluorobutane, perfluorohexane and fluoroheptane.
19. (New) The method of claim 14 wherein the liquid suppressant is an aqueous solution comprising an additive.
20. (New) The method of claim 19 wherein the additive comprises ammonium phosphate salts, potassium phosphate salts, potassium acetate, potassium bicarbonate, potassium carbonate, potassium bromide, potassium iodide, surfactants, or any combinations thereof.
21. (New) The method of claim 14 wherein the gas generator and discharge assembly is selected to include a rigid metallic firing pin housing comprising:
a distal end portion containing proximal end portions of an ignition cord and flexible tube;
an intermediate portion holding the primer in press fit relation;
a proximal portion at least partially containing the firing pin; and
wherein a discharge path for the suppressant extends through at least one lateral aperture in the firing pin housing and therefrom, through a proximal end of the firing pin housing.
22. (New) A method of manufacturing a fire extinguisher fire extinguisher comprising:
providing a bottle having an interior and at least an outlet;

introducing a fire suppressant into the bottle when the extinguisher is in a pre-discharge condition; and

securing and extending through a gas generant and discharge assembly to the bottle outlet;

wherein the gas generant and discharge assembly comprises:

a source of gas for pressurizing the suppressant at least when the bottle is in a discharging condition comprising:

an ignition cord having a sheath and a pyrotechnic charge contained within the sheath and extending from a proximal end to a distal end;

a flexible tube surrounding the sheath at least along a major portion of a length thereof and extending from a proximal end to a distal end;

a gas generant charge contained between the tube and sheath; and
means for igniting the ignition cord; and

an outlet, through which the suppressant is discharged when the extinguisher is in the discharging condition.

23. (New) The method of claim 22 wherein:

the means for igniting is selected to include a percussion primer having a primer charge and an operative end in close facing relationship to the proximal end of the ignition cord effective to ignite the ignition cord;

the gas generator and discharge assembly comprises:

a first handle portion positioned to be gripped by the fingers of a user's hand and a second handle portion positioned to be simultaneously engaged by a palm of said hand and mounted to be shifted toward the first handle portion responsive to a compressive force applied by the hand;

firing pin mechanism mounted for spring-biased movement between an initial position and second position in which an operative end portion of the firing pin mechanism contacts the percussion primer with effective momentum to trigger the primer.

24. (New) The method of claim 23 wherein:
the firing pin mechanism is selected to include:
a spring-loaded firing pin initially held in its initial position by a sacrificial
element against the spring-bias force; and
a lance shiftable between its initial position and its second position by said
movement of the second handle portion, the shift of the lance rupturing the sacrificial
element to release the firing pin.
25. (New) The method of claim 24 further including a seal, initially between the lance and
the firing pin and initially sealing the bottle interior from an external environment and
mounted so as to be ruptured by the shift of the lance.
26. (New) The method of claim 25 wherein the gas generator and discharge assembly
further including a rigid metallic firing pin housing comprising:
a distal end portion containing proximal end portions of the ignition cord and flexible
tube;
an intermediate portion holding the primer in press fit relation; and
a proximal portion at least partially containing the firing pin; and
wherein a discharge path for the suppressant extends through at least one lateral
aperture in the firing pin housing and, therefrom, through a proximal end of the firing pin
housing.
27. (New) The method of claim 26 wherein in the pre-discharge condition the pressure
within the bottle is lower than 70 psi and the ignition cord pyrotechnic charge and the gas
generant charge are, in combination, effective to at least temporarily elevate the pressure
within the bottle to between 300 and 450 psi.
28. (New) The method of claim 22 wherein the suppressant consists in major mass part of
heptafluoropropane, and has a total mass of less than 7 pounds.

29. (New) The method of claim 28 wherein the total mass is 2–3 pounds.
30. (New) The method of claim 28 wherein a minimum bottle diameter between the interior and the outlet is no more than 0.5 inch.
31. (New) The method of claim 30 wherein the ignition cord has a length of between 1 and 3 feet.
32. (New) The method of claim 22 wherein the ignition cord has a length of at least one foot.
33. (New) The method of claim 22 wherein the suppressant comprises 2-3 pounds of dodecafluoro-2-methylpentan-3-one.
34. (New) The method of claim 22 wherein the suppressant consists essentially of at least one fluorocarbon.